Inflorescence of Euphorbia.—Another student, SCHMIDT, has undertaken to interpret the morphology of the cyathium of Euphorbia,[28] regarding which there are nearly as many views as investigators. He considers the cyathium as an inflorescence, of unequal development in different species, in which the primary staminate flowers arise first in a spiral of $\frac{2}{5}$ divergence sometimes so low as to bring the flowers almost into a whorl. Next arise the involucral leaves (except in *E. meloformis*). The shoot which forms the primary staminate flowers branches at first dichasially; next to form *Wickeln* (perhaps also *Schraubeln*) so that the whole in the axil of an involucral leaf is a *Doppelwickel* (*Doppelschraubel*). The scales arise mostly at the base of the second and third staminate flowers of each group and are to be looked upon as their bracts. They are unequally developed, being generally larger the more open is the spiral of the involucral leaves, whose insertion is sometimes enlarged on the inside, and concrescent with the scales. The nectaries are to be considered as emergences. *E. capitulata* Rchb. is separated from the genus to form a new one, *Diplocyathium*, on account of its aberrant inflorescence.—C. R. B.

Spectrum of chlorophyll.—It is well known that the absorption bands in the spectrum of a live leaf do not correspond in position to those of a solution of chlorophyll. To account for this "displacement" two theories have been current: that the chlorophyll exists as solid particles like a precipitate in the chloroplast (HAGENBACH, LOMMELL, REINKE); or that the chlorophyll in the chloroplast is dissolved and its solvent modifies the spectrum because it has a higher dispersive power (KUNTH, TSCHIRCH). IWANOWSKI, after spectrophotometric studies, agrees with neither of these views.[29] He succeeded in producing a spectrum almost exactly like that of a live leaf by precipitating chlorophyll in strong alcoholic solution by diluting with water and adding a few drops of $MgSO_4$. On this and other grounds he concludes that the spectrum due to the light reflected from the chloroplasts themselves superposed on the true absorption spectrum produces the displacement, which increases with the size of the granules. This resembles in fundamentals TIMIRIAZEFF'S hypothesis of 1872.—C. R. B.

Morphology of Aspergillus.—FRASER and CHAMBERS,[30] in a study of *Aspergillus herbariorum*, reach the following conclusions. The conidiophores are multinucleate, and each conidium contains about four nuclei. The female organ consists of a septate stalk, a one-celled ascogonium, and a one-celled trichogyne, all of which are multinucleate. The antheridium is a small, long-stalked, multinucleate cell which either fuses with the tip of the trichogyne or degenerates before reaching this stage. Normal fertilization probably occurs in some cases, and

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[28] SCHMIDT, H., Ueber die Entwicklung der Blüten und Blütenstande von *Euphorbia* L. und *Diplocyathium* n. g. Beih. Bot. Centralbl. **22**[1]:21–69. *pls. 2–5*. 1907.

[29] IWANOWSKI, D., Ueber die Ursache der Verschiebung der Absorptionsbänder in Blatt. Ber. Deutsch. Bot. Gesells. **25**:416. 1907.

[30] FRASER, H. C. I., and CHAMBERS, H. S., The morphology of *Aspergillus herbariorum*. Annales Mycol. **5**:419–431. *pls. 11, 12*. 1907.